



14TH ANNUAL BUILDING CODES EDUCATION CONFERENCE

April 22 – 25, 2019

Gran Tree Inn & Holiday Inn – Bozeman, MT

Online Registration

bsd.dli.mt.gov/2019-building-codes-conference

Parking Information

Parking space is limited in the Gran Tree Inn's parking lot, so please use the large lot located next door at the Holiday Inn as overflow parking.

Lodging Information

Room blocks are available at the Best Western Gran Tree Inn (www.bestwestern.com) or (406) 587-5261 – promo code “**BUILD419**” and the Holiday Inn (www.hibozeman.com) or (406) 587-4561 – promo code “**MBC**” at the discounted government rate. Space is limited and fills up fast. Be sure register for accommodations before the room blocks close on April 11, 2019.

Continuing Education Credits

All courses offered at the conference are approved for self-reporting continuing education credits. Courses presented by ICC and CCC instructors will report your AIA credits for you if you provide your AIA number on the course sign in sheets. Please pay close attention to each course description for the type of credits available. **All other AIA credits will be self-reported.** The certificates issued for most of the courses offered at the conference will qualify for State Board of Architects licensing CE. Please be advised that the amount of CEUs awarded vary slightly by provider.

The Conference Locations

Due to the continued success of the conference we are once again utilizing additional meeting space at the Holiday Inn, which is located directly adjacent to the Gran Tree Inn. Please pay close attention to the signs that will be posted around the Gran Tree Inn indicating which courses are being held at the Holiday Inn.

Vendor Expo and Social

The Tuesday evening Expo/Social event has continued to be a success and grows in popularity as the years progress. Do not miss this opportunity to network with hundreds of professionals operating in the fields of architecture, engineering, residential building, and commercial contracting. The Expo will also be well attended by Fire and Code Officials.

The Expo will be held on Tuesday April 23, 2019 from 1:30pm to 6:30pm. Prizes will be given away, and Hors d'oeuvres and refreshments will be served during the event.

CONTACT INFORMATION

Traci Collett: (406) 841-2016 or tcollett@mt.gov





BUILDING CODES EDUCATION CONFERENCE COURSES

This conference is presented for **Design Professionals, Building Code Officials, Fire Officials, Residential Builders, Commercial Contractors, Inspectors, and other professionals** interested in learning about building codes and other related topics.

Monday April 22, 2019

Fire Alarm Acceptance Testing

JOHN SWANSON - FULL DAY

This full day course will provide code officials responsible for performing acceptance (or final) testing and design professionals with the necessary information to ensure the fire alarm installation as installed meets the requirements of NFPA 72. Topics to be discussed include: when and where smoke detection is required above the fire alarm control panel; proper placement of initiating devices with detailed criteria for smoke and heat detectors based on ceiling configuration; interfacing elevator control functions with the building fire alarm system; and compliant vs. non-compliant options for transmitting the fire alarm signal from the protected premises to the supervising station. **This course is approved through ICC and provides a class certificate to building and fire code officials. The certificate issued for this course also qualifies as State of Montana Fire Protection License continuing education credits.**

International Residential Code Transition 2012 to 2018

STEVE VANNOTE - FULL DAY

This seminar will assist participants in implementing the transition from the 2012 IRC to the 2018 IRC. It will include relevant changes in the 2015 IRC. This interactive training will focus on the key changes presented in the participant material. Knowledge review questions will provide opportunity for participants to discuss and consider the changes. **This course is approved through ICC and provides a class certificate to building and fire code officials. The certificate issued with this class also qualifies for Montana State Board of Architects licensing CE. Additionally, provider will report AIA credits for course attendees providing AIA numbers on the course sign in sheet.**

2018 International Building Code Commercial Plan Review

BILL CLAYTON - FULL DAY

Explains the process of conducting a plan review for small/medium sized commercial projects. The course will cover the Building Code requirements for commercial projects with a focus on the building code portion of review based on the 2018 International Building Code. The course will provide students with formats for comment letters, process and understanding of how to conduct a commercial plan review and covering changes to the 2018 IBC that will affect your plan review and design. It will also provide design professionals with a broad understanding of the necessary submittal documents plans examiners need to assist in project approval in the first review. Topics will include creating/reading a code study, height and area calculations, mixed occupancy, fire-resistance-rated review, where to find occupancy specific requirements and a basic overview of accessibility plan review. **This course is approved through ICC and provides a class certificate to building and fire code officials. The certificate issued with this class also qualifies for Montana State Board of Architects licensing CE. Additionally, provider will report AIA credits for course attendees providing AIA numbers on the course sign in sheet.**

Solar Photovoltaics and the 2017 NEC

MITCH HEGMAN, SOLID STATE EDUCATORS - HALF DAY (PM)

The NEC 2017 "Top Ten" Solar PV Changes, Additions and Focal Points will overview and provide discussion on solar code related issues, which, through input from the installer, inspector and utility communities in the United States and Montana are emerging as important topics of the 2017 code cycle. Among these are rapid system shutdown, load and line side



connections, and supplemental energy storage systems. This class is directed towards common Montana solar PV system characteristics (types, sizes, components). Sponsored by Northwestern Energy, the class will also provide a brief overview of past and current PV demographics in the State, as well as a preview of emerging solar technologies and trends likely to impact Montana. **This course is valid for 4 hours of (CODE) CE credits for anyone with a Montana electrician's license.**

2018 IBC Transition from the 2012 Structural Provisions

SANDRA HYDE – HALF DAY (AM)

For building departments, engineers, architects and contractors interested in the structural changes to the 2018 IRC; this seminar gives an overview of the structural changes in Chapters 16-23 of the 2018 IBC. The class identifies changes in organization and code requirements and the applicability of these requirements to design, plan review and inspection. **This course is approved through ICC and provides a class certificate to building and fire code officials. The certificate issued with this class also qualifies for Montana State Board of Architects licensing CE. Additionally, provider will report AIA credits for course attendees providing AIA numbers on the course sign in sheet.**

2018 IBC Structural Loads-Wind

SANDRA HYDE – HALF DAY (PM)

This seminar reviews the details of developing wind loads using the 2018 International Building Code® (IBC®) and the wind load procedures in ASCE/SEI 7-10, Minimum Design Loads for Buildings and Other Structures. An overview of the methods used to determine wind loads in ASCE/SEI 7-10 for main-wind-force resisting systems and components and cladding is included, as well as a discussion of the significance of the changes in ASCE/SEI 7-10 for the design of buildings. **This course is approved through ICC and provides a class certificate to building and fire code officials. The certificate issued with this class also qualifies for Montana State Board of Architects licensing CE. Additionally, provider will report AIA credits for course attendees providing AIA numbers on the course sign in sheet.**

2018 UPC Essentials

JED SCHEUERMANN – FULL DAY

This seminar is an excellent opportunity to get-up-to speed on what you need to know to be able to effectively use the 2018 UPC. By providing a fundamental understanding of the code, this seminar offers participants an opportunity to learn the basics of the 2018 UPC by showing how the code is organized, discussing the key concepts, and identifying important provisions in each chapter. Each chapter is covered in an easy-to-understand way that supplies the “need to know” information required to successfully understand and apply the provisions of that chapter. **In addition to providing education credit and providing a class certificate to building officials and inspectors, the certificate issued with this class qualifies as continuing education credits for the State of Montana Board of Plumbers.**

Tuesday April 23, 2019

Fire Alarm Inspection, Testing & Maintenance

JOHN SWANSON – HALF DAY (AM)

This course will provide attendees with criteria from the 2018 International Fire Code (IFC) and the 2016 edition of NFPA 72, National Fire Alarm and Signaling Code. Topics to be discussed include: how to address inspection, testing and maintenance of non-required fire alarm systems; issues with improperly maintained fire alarm systems; and chapter 14 of NFPA 72 regulating how initiating devices, notification appliances, and emergency voice alarm communication systems should be tested, inspected and maintained. **This course is approved through ICC and provides a class certificate to building and fire code officials. The certificate issued for this course also qualifies as State of Montana Fire Protection License continuing education credits.**



2018 IRC Review: Administration, Definitions, and Building Planning – Chapters 1, 2, 3, Intermediate Level

RUSSELL THORNBURG – FULL DAY

The overview of these chapters will provide both the administrative base and essential backbone needed for understanding the building and planning sector of the design and construction process. This course will be of interest to contractors, building inspectors, plan reviewers, architects, and design professionals. The course will include: Identifying administrative authority; identifying the scope and intent of administration; defining the concepts of building and planning; and structural integrity with continuous load path. **This course is approved through ICC and provides a class certificate to building and fire code officials.**

2018 IBC Commercial Inspection

BILL CLAYTON – FULL DAY

Provides commercial inspectors with techniques and an understanding of conducting inspections of commercial buildings. The discussion will include preparation, and inspections of the building, including reading and inspecting Fire-Resistance-Rated assemblies, inspecting means-of-egress, construction materials related to construction type and accessibility inspections. Design Professionals, Building Inspectors and contractors will learn the necessary information to be included on the plans and available at the site to enable an inspector to perform the inspections. **This course is approved through ICC and provides a class certificate to building and fire code officials. The certificate issued with this class also qualifies for Montana State Board of Architects licensing CE. Additionally, provider will report AIA credits for course attendees providing AIA numbers on the course sign in sheet.**

2018 IBC Transition from the 2012

DOUG THORNBURG – FULL DAY

For building departments, engineers, architects and contractors interested in the structural changes to the 2015 and 2018 IRC; this seminar gives an overview of the structural changes in Chapters 16-23 of the 2015 and 2018 IBC. The class identifies changes in organization and code requirements and the applicability of these requirements to design, plan review and inspection. **This course is approved through ICC and provides a class certificate to building and fire code officials. The certificate issued with this class also qualifies for Montana State Board of Architects licensing CE. Additionally, provider will report AIA credits for course attendees providing AIA numbers on the course sign in sheet.**

Carbon Monoxide, Gas Detection and the 2018 IFC

JOHN SWANSON – HALF DAY (PM)

This course will provide attendees with the updated requirements in the 2018 International Fire Code (IFC) relating to carbon monoxide and gas detection systems. It's very common for these life safety systems to be interconnected to the building fire alarm systems. Topics to be discussed include: changes to the carbon monoxide requirements between the 2012, 2015 and 2018 IFC; new requirements and changes to the gas detection requirements between the 2012, 2015 and 2018 IFC; and how these systems should be connected to the building fire alarm system. **This course is approved through ICC and provides a class certificate to building and fire code officials. This course also qualifies as State of Montana Fire Protection License continuing education credits.**

2018 IBC Structural Loads- Seismic

SANDRA HYDE – HALF DAY (AM)

This seminar reviews the details of developing seismic load effects using the 2015 International Building Code® (IBC®) and ASCE/SEI 7-10, Minimum Design Loads for Buildings and Other Structures. The course topics include: structural integrity, Site Class, Risk Category, Mapped Spectral Response Accelerations, Design Spectral Response Accelerations, and Seismic Design Category. A discussion of load combinations including the seismic load equations of Chapters 12 and



13 is included. **This course is approved through ICC and provides a class certificate to building and fire code officials. The certificate issued with this class also qualifies for Montana State Board of Architects licensing CE. Additionally, provider will report AIA credits for course attendees providing AIA numbers on the course sign in sheet.**

2018 IBC Wood Framed Shear Walls

SANDRA HYDE – HALF DAY (PM)

This course discusses the purpose of shear walls and reviews their design and use in light-frame wood construction using the 2018 International Building Code® (IBC®), 2018 Special Design Provisions for Wind and Seismic (2015 SDPWS) and 2015 National Design Standard (NDS). Topics include shear wall design, diaphragms, chords, collectors and anchorage, and determining when prescriptive braced wall panels vs. engineered shear walls are used. **This course is approved through ICC and provides a class certificate to building and fire code officials. The certificate issued with this class also qualifies for Montana State Board of Architects licensing CE. Additionally, provider will report AIA credits for course attendees providing AIA numbers on the course sign in sheet.**

2018 IMC Design, Installation and Inspection Principles

JIM CIKA – FULL DAY

This seminar highlights key provisions of the 2018 International Mechanical Code® (IMC®) and provides practice in applying key requirements. It reinforces learning by supplying immediate feedback or clarification. It walks participants through the content outline of the code book and describes key sections. **This course is approved through ICC and provides a class certificate to building and fire code officials. The certificate issued with this class also qualifies for Montana State Board of Architects licensing CE. Additionally, provider will report AIA credits for course attendees providing AIA numbers on the course sign in sheet.**

Wednesday April 24, 2019

NFPA 13, 13D and 13R 2016 Update

JEFFREY M. HUGO – FULL DAY

Bring your 2016 Edition of the sprinkler standards a notebook and a highlighter. This full day seminar discusses the significant changes to the sprinkler standards. The seminar will go chapter-by-chapter and not just identify the new requirements, but discuss the reasons supporting them and the issues behind them as well as their potential impact. Attendees should bring a copy of the 2016 Edition. **This seminar is approved through ICC as course number 11826. NFSA is an approved NICET Recognized Training Provider. In addition to providing education credits and providing a class certificate to building and fire code officials this course qualifies as State of Montana Fire Protection License continuing education credits.**

2018 IBC Height and Area and Mixed Occupancy

BILL CLAYTON – FULL DAY

Comprehensive discussion of the major compartmentalization concepts of the IBC, focusing on those requirements that deal with building size, sprinkler options and mixed-use buildings. Fire-resistance-rated construction is also addressed. This course will include topics on allowable areas, area increases, unlimited area buildings, fire area concept and construction, incidental/accessory use areas and separated/non-separated uses. The class will include practical exercises and discuss necessary documentation on the plans for plan review and inspection to aid Design Professionals in submitting complete documents. **The certificate issued with this class qualifies for ICC education credit and for Montana State Board of Architects licensing CE. Additionally, provider will report AIA credits for course attendees providing AIA numbers on the course sign in sheet.**



2018 IRC Review – Chapters 4 – 6, Intermediate Level

RUSSELL THORNBURG – FULL DAY

Part of the building planning section, chapters 4 – 6, will be reviewed with detailed explanations and illustrations of required floor and wall construction and wall covering assembly. This course will be of interest to contractors, building inspectors, plan reviewers, architects, and design professionals. The course will cover: Building and inspecting the most common footings and foundation walls; the main types of floor assemblies; a review of three of the four types of floor assemblies: wood floor framing, wood floors on the ground, and concrete slabs on the ground; review the structural integrity of wall construction; and review designs and construction of interior and exterior wall designs. **The completion certificate for this course qualifies for ICC education credit for building and fire code officials.**

2018 UPC Drain Waste & Vent (DWV) Provisions & Sizing

JED SCHEUERMANN – FULL DAY

A plumbing system relies on the interconnected drain, waste, and vent systems (DWV) in order to operate efficiently and safely. This seminar provides a detailed review and discussion of the DWV requirements in the Uniform Plumbing Code® (UPC). The provisions in the 2018 UPC that govern the proper installation and design of DWV systems will be discussed. In-depth demonstrations on how to properly size DWV systems according to the UPC will take place with several opportunities to practice sizing those systems. **In addition to providing education credit and providing a class certificate to building officials and inspectors, the certificate issued with this class qualifies as continuing education credits for the State of Montana Board of Plumbers.**

Construction Site Safety

DEPARTMENT OF LABOR & INDUSTRY SAFETY BUREAU – FULL DAY

This course will review and address new and important OSHA regulations. Topics covered include: New OSHA regulations for silica and proper respirator use; trenching safety, forklift safety/training; as well as an overall update on new OSHA rules. **A certificate of completion will be provided to all attendees of this course.**

SMACNA/ANSI HVAC Duct Construction Standard, Metal & Flexible, 3rd edition & Fire, Smoke and Radiation Damper Installation Guide and Codes for HVAC Systems

ELI HOWARD & CARSON CATES – HALF DAY (AM)

This dynamic two-part session will cover the SMACNA/ANSI HVAC Duct Construction Standard – Metal & Flexible, 3rd edition, which is mandated by the International Mechanical Code (IMC). Specific topics will include: basic rectangular, round & flat oval duct construction, duct material types, use & applications of duct joints, methods of internal & external duct reinforcement, & duct fittings, double-wall duct, duct lining. Plus, the Fire, Smoke & Radiation Damper session will cover the who, what, why on the use and application of fire, & smoke dampers in various applications for conformance to the International Building Code (IBC) and International Mechanical Code (IMC). **A certificate of completion will be provided to all attendees of this course.**

Thursday April 25, 2019

ASHRAE 90.1-2016 Energy Standard for Buildings: An Overview

ERIK MAKELA – HALF DAY (AM)

This half-day course will provide an overview of ASHRAE 90.1-2016 Energy Standard for Buildings. The International Energy Conservation Code (IECC) allows ASHRAE 90.1 as an alternative compliance path for commercial buildings. Architects, designers, contractors, and building officials/inspectors will learn how the latest edition of the standard can be used for code compliance. The presenter has over 30 years of building energy codes expertise throughout the United States as well as abroad. He is lead for the Northwest Energy Codes Group in developing code change proposals to the IECC. The



certificate issued with this class qualifies for ICC education credit and for Montana State Board of Architects licensing CE. **The course provider will report AIA credits for course attendees providing their AIA number on a course sign in sheet. The certificate issued with this class qualifies for ICC education credit and for Montana State Board of Architects licensing CE. Provider will report AIA credits for course attendees providing their AIA number on the course sign in sheet.**

Residential Energy Code Reality Check: Compliance Study and Performance Testing

DALE HORTON – HALF DAY (PM)

This half-day session will be presented in two parts. The first part will use the results of a 2018 code compliance survey to discuss challenges and opportunities related to Montana's residential energy code. The second part will be a condensed course on building tightness and duct tightness testing based on the 2018 IECC. This course was developed by the National Center for Appropriate Technology (NCAT) and introduced in 2019. Given the growing importance of performance testing this session will be of interest to builders, designers, contractors, and building officials/inspectors. The presenter is an architect as well as a HERS Rater Trainer. **The certificate issued with this class qualifies for Montana State Board of Architects licensing CE. The course provider will report AIA credits for course attendees providing their AIA number on a course sign in sheet.**

2018 IBC Fire-Resistance-Rated Assemblies, Joints, Penetrations & Dampers

BILL CLAYTON – FULL DAY

Focuses on those elements of buildings that are required to be fire-resistance-rated due to other provisions of the code. Based on the International Building Code® (IBC®), provision applicable to all occupancies and construction types will be addressed. This course is applicable to all aspects of the regulatory/design/construction community, including building and/or fire officials, plans examiners, inspectors, design professionals and contractors. Major topics include: required fire-resistance-rated construction in the IBC, resources to verify fire-resistance-rated construction, fire walls, fire barriers and fire partitions, horizontal assemblies, shaft enclosures, fire doors and fire windows, penetrations and joints, fire dampers and smoke dampers, fire-blocking and draft-stopping. **This course is approved through ICC and provides a class certificate to building and fire code officials. The certificate issued for this course also qualifies as State of Montana Fire Protection License continuing education credits.**

2018 IRC Review – Chapters 7 – 10, Intermediate Level

RUSSELL THORNBURG – FULL DAY

A complete review of chapters 7 - 10, Wall Covering, Roof-Ceiling Construction, and Roof Assemblies will be covered, along with engineered designs and light-frame construction methods. This course will be of interest to contractors, building inspectors, plan reviewers, architects, and design professionals. Topics covered include: Review designs and construction of interior and exterior wall designs; construction methods from the top plate to the ridge; review construction methods of continuous load path; review Wood Truss Council Association (WTCA); review roof covering construction materials; as well as an overview of chimney and fireplace requirements. **The completion certificate for this course qualifies for ICC education credit for building and fire code officials.**

2018 IBC Means of Egress

DOUG THORNBURG – FULL DAY

This course addresses numerous provisions in the 2018 International Building Code® (IBC®) where the code contains requirements pertaining to establishing a means of egress in buildings. The course is intended to help plan reviewer or building code officials responsible for plan review identify those areas where plan review will include compliance with the IBC. During this training, participants will listen to lecture and view examples, as well as discuss sections of the IBC that pertain to means of egress. They will participate in activities that involve a set of plans. **The certificate issued with this class qualifies for Montana State Board of Architects licensing CE. Additionally, provider will report AIA credits for course attendees providing AIA numbers on the course sign in sheet.**



2018 IPC Methods of Venting Plumbing Fixtures and Traps

LEE CLIFTON – HALF DAY (AM)

NOTE: The State of Montana is not proposing to adopt the IPC at this time and this course is only being provided for educational purposes.

During this session, we will present the various approaches to venting that are permitted in the 2018 IPC. You will find that these venting provisions offer the installer and designer different paths to achieving an adequately vented system, which could result in cost savings along with ease of installation in different types of construction. **This course will provide continuing education credits to building and fire officials. In addition, the certificate issued with this class qualifies for Montana State Board of Architects licensing CE. Additionally, provider will report AIA credits for course attendees providing AIA numbers on the course sign in sheet.**

Monday, April 22 nd						
8AM - 12PM	Fire Alarm Acceptance Testing	IRC Transition 2012-2018	2018 IBC Commercial Plan Review	2018 UPC Essentials	2018 IBC Transition from the 2012 Structural Provisions	
LUNCH 12PM - 1PM						
1PM - 5PM	Fire Alarm Acceptance Testing (continued)	IRC Transition 2012-2018 (continued)	2018 IBC Commercial Plan Review (continued)	2018 UPC Essentials (continued)	2018 IBC Structural Loads - Wind	Solar Photovoltaics & the 2017 NEC
Tuesday, April 23 rd						
8AM - 12PM	Fire Alarm Inspection, Testing Maintenance	2018 IRC Review - Chapters 1-3	2018 IBC Commercial Inspection	IBC Transition 2012 - 2018	2018 IMC Design Installations & Inspection Principles	2018 IBC Structural Loads - Seismic
LUNCH 12PM - 1PM						
1PM - 5PM	Carbon Monoxide & Gas Detection Systems 2018 IFC	2018 IRC Review - Chapters 1-3 (continued)	2018 IBC Commercial Inspection (continued)	IBC Transition 2012 - 2018 (continued)	2018 IMC Design Installations & Inspection Principles (continued)	2018 IBC Wood Framed Shear Walls
EXPO SOCIAL 4:30 PM - 7PM						
Wednesday, April 24 th						
8AM - 12PM	NFPA 13, 13D & 13R Update	2018 IRC Review - Chapters 4-6	2018 IBC Height & Area & Mixed Occupancy	Construction Site Safety	2018 UPC Drain, Waste & Vent (DWV) Provisions & Sizing	ANSI HVAC Duct Construction Standard, Metal & Flexible/ Fire, Smoke, & Radiation Dampers
LUNCH 12PM - 1PM						
1PM - 5PM	NFPA 13, 13D, & 13R Update (continued)	2018 IRC Review - Chapters 4-6 (continued)	2018 IBC Height & Area & Mixed Occupancy (continued)	Construction Site Safety (continued)	2018 UPC Drain, Waste & Vent (DWV) Provisions & Sizing (continued)	
MONTANA ICC CHAPTER MEETING 5PM						
Thursday, April 25 th						
8AM - 12PM	ASHRAE 90.1 - 2016 Energy Standard for Buildings Overview	2018 IRC Review - Chapters 7-10	2018 Fire-resistance Rated Assemblies, Penetrations, Joint & Dampers	2018 IBC Means of Egress	2018 IPC Drain and Waste Venting Requirements	
LUNCH 12PM - 1PM						
1PM - 5PM	Residential Energy Code Realty Check: Compliance Study and Performance Testing	2018 IRC Review Chapters 7-10 (continued)	2018 Fire-resistance Rated Assemblies, Penetrations, Joint & Dampers (continued)	2018 IBC Means of Egress (continued)		